Preserving the National Pastime:

Recommendations for Major League Baseball's Next Collective Bargaining Agreement

An Honors Thesis (HONRS 499)

by

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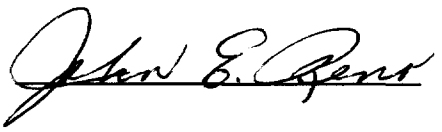

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TABLE OF CONTENTS

TABLES AND FIGURES

Tables

Figures

PURPOSE

After the longest work stoppage in the history of Major League Baseball only four years ago, baseball is in a delicate situation as it closes in on the end of its current collective bargaining agreement. Baseball has some issues to work through to ensure that it remains the national pastime because any type of labor strife in the next couple of years could possibly ruin the game forever.

As a fan and hopefully a future employee of this great game, I am very concerned about the health of baseball. Many people have already written if off as they suggest the sport is headed for disaster. Although I disagree with these sentiments, I do think baseball needs to analyze its current state and make some changes.

With that said, this paper attempts to analyze the state of baseball, identify its problem areas, and offer some recommendations for the next collective bargaining agreement. It will answer the following questions:

- Is baseball in as bad of a situation as many make it out to be?
- What is wrong with baseball?
- What can be done to fix these problems?

Chapter I

STATE OF BASEBALL

The general consensus of people about Major League Baseball is that it is in a state of shambles and on track for destruction. However, these sentiments have been felt throughout its history. The natural question then is, "What is the true state of baseball?" This must be understood before any recommendations can be made as to what direction baseball needs to take in its next collective bargaining agreement. By analyzing some of the main controversial topics of today's game, including competitive balance, its relation to payroll, team finances, and salaries, a better understanding of the current state of baseball can be achieved.

Competitive Balance

Competitive balance is the buzzword of the 1990s. People continue to complain about the competitive balance of Major League Baseball. So how bad is the competitive balance of baseball today? So bad that the 1990s is the most competitively balanced decade in baseball's history. Consider the following statistics for the 1990s:

- 23 of the 28 teams (excluding the most recent expansion clubs in Arizona and Tampa Bay) have winning percentages between .476 and .523, which translate to 76 and 85 wins respectively in a 162 game season. The vast majority of these teams are clumped around .500.

- Of the four teams with the worst winning percentages in the 1990s (Marlins, Tigers, Phillies, and Twins), three have reached the World Series and two have won it.
- Every team has finished first or second in their division at least one time ("The Truth").

These facts are great, but how do the 1990s stack up against other decades? The answer to that question is a definite, "Even better." The competitive balance of a decade can be measured in a number of ways. For example, Table 1.1 provides the percentage of teams that had extreme records—that is a wining percentage of .600 or better or .400 or worse. As you can see, the total percentage of teams that finished with extreme winning percentages is lower each decade. Barring some crazy 1999 season, the 1990s will have the lowest percentage of teams finishing with extreme records. One factor to consider is that the 1990s has seen two expansions adding four new teams. However, the percentages presented in this table are extremely low and substantially better than any other decade.

TABLE 1.1

Decade	**.600+**	**.400+**	**TOTAL**
1901-09	21.5	23.6	45.1
1910-19	14.4	15.6	30.0
1920-29	15.0	15.0	30.0
1930-39	15.6	18.8	34.4
1940-49	15.6	13.1	28.8
1950-59	15.0	14.4	29.9
1960-69	9.1	12.6	21.7
1970-79	10.6	10.2	20.8
1980-89	5.8	8.1	13.9
1990-98	6.5	4.4	10.9

Source: "It's All"

Another method to determine competitive balance is to analyze the distributions of winning percentages for teams. This analysis includes a number of statistical

calculations including standard deviation, ratio of maximum to minimum, and coefficient of variation. Table 1.2 shows the results from this type of analysis. The standard deviation for each year explains the statistical variation around the mean. Therefore, the lower the standard deviation, the less variation there was around .500 for all the teams' winning percentages. (The mean of .500 is obvious since it represents equal wins and losses, and each game includes a win and a loss.) The maximum over minimum figure represents what portion the minimum winning percentage in a season is of the maximum winning percentage. As those two get closer, the maximum/minimum figure approaches one. Therefore, the lower this figure is, the less variation there is. The coefficient of variation is the mean divided by the standard deviation. Since a lower standard deviation means more competitive balance, a lower coefficient of variation means the same. As you can see from the table, with the exception of 1998, the 1990s have some of the lowest of all these figures. This is indicative of a more competitively balanced decade.

In case you are still not convinced, there is yet another way to demonstrate competitive balance. In 1990, the top eight teams in baseball in terms of wins averaged 92 wins with the bottom nine teams averaging 72. In 1991, those figures were 91 and 70 respectively. The last two years have not been much different. In 1997, the numbers were 92 and 71 while in 1998, they were 96 and 67. These 1998 figures are somewhat more extreme, but they can be attributed to the record-setting Yankees. They still do not differ much from the 1993 and 1994 seasons when the top eight teams won 94 and 95 games respectively ("The Truth").

These methods have all shown that the 1990s is the most competitive decade, but 1998 appears to be a drastic exception. In addition to the previosly mentioned data, four

teams won 60% of their games in 1998. That has not happened since 1985. Two of them, led by the record-setting New York Yankees, won 65% of their games. That has not happened since 1954 ("Wait"). So was 1998 a signal that the competitive balance was being destroyed? No, it was just what the data said it was – an exception.

TABLE 1.2

Distribution of Winning Percentages

Year	Standard Deviation	Minimum	Maximum	Maximum/ Minimum	Coefficient Of Variation
1952	.1029	.273	.627	2.297	.2058
1955	.0914	.344	.641	1.863	.1828
1958	.0519	.396	.597	1.508	.1038
1962	.0957	.250	.624	2.497	.1914
1965	.0880	.309	.630	2.039	.1760
1968	.0600	.404	.636	1.574	.1200
1972	.0734	.351	.619	1.764	.1468
1975	.0721	.358	.667	1.863	.1442
1975	.0750	.350	.613	1.751	.1500
1982	.0646	.370	.586	1.584	.1292
1985	.0778	.354	.623	1.760	.1556
1988	.0742	.335	.642	1.809	.1484
1990	.0559	.401	.636	1.586	.1118
1991	.0597	.352	.605	1.719	.1194
1992	.0632	.389	.605	1.555	.1264
1993	.0750	.364	.642	1.764	.1500
1994	.0683	.402	.649	1.614	.1366
1995	.0714	.389	.694	1.784	.1428
1996	.0619	.327	.615	1.881	.1238
1997	.0594	.401	.623	1.554	.1188
1998	.0833	.333	.704	2.114	.1666

Source: www.baseball1.com

Competitive Balance and Payroll

However, the relationship between winning and team payroll is becoming more pronounced. At one point in baseball's history, buying a winning team was possible and even likely. Then free agency became part of the game, and teams have since done a poor job of signing free agents or paying a player according to his output. Average team salary has been related only tenuously to team performance (Zimbalist 96). That was

before the 1990s, which have shown some different results. Only a stronger relationship between winning and team payroll can explain these statistics:

- In 1990, the best teams had a payroll of $17.7 million, while the worst teams had an average payroll of $16.1 million. These close payrolls for baseball's best and worst teams continued through 1992. Then things began to change. In 1998, the best 10 teams had an average payroll of $57.2 million, while the 10 worst had a payroll of $23.8 million
- In 1998, only one team in the bottom half of payrolls finished above .500. Only two teams in the top half of payrolls finished below .500.
- During the last three years, only four teams with payrolls greater than $40 million have made the playoffs. That is four out of the possible 24 berths.
- Of the eight postseason teams in 1998, none were lower than twelfth in payroll. Compare that to the 1991 World Series when the Twins and Braves met for the title with the sixteenth and nineteenth highest payrolls.
- In 1990, the top third of all payrolls averaged 83 wins, while the bottom third averaged 78 wins. In 1991, the top third averaged 81 wins, while the middle third averaged 86 wins. Last year, the 10 highest payrolls averaged 92 wins, while the bottom 10 averaged 68 wins.

Further evidence of this increased relationship between payroll and winning is found in Table 1.3. For each year, teams are divided into three tiers based on their payroll. As you can see, up until 1992, only six or fewer wins separated the big spenders from the little spenders. In fact, the middle tier won more games than the top tier in 1991. However, the gap widened to 11 wins in 1993, 17 wins in 1995, and 24 wins in

1998. Again, 1998 appears to be an exception, but the three years before it all had differences of 15 or more wins between the top tier and the bottom tier.

TABLE 1.3

		Average Payroll (millions)	**Average Wins**
1990	Top	$21.0	83
	Middle	16.7	83
	Bottom	12.0	78
1991	Top	33.6	81
	Middle	25.0	86
	Bottom	17.0	76
1992	Top	41.6	86
	Middle	31.4	78
	Bottom	21.9	80
1993	Top	43.8	85
	Middle	32.6	84
	Bottom	20.5	74
1994*	Top	42.0	88
	Middle	33.1	80
	Bottom	22.2	75
1995*	Top	44.6	89
	Middle	34.4	82
	Bottom	20.2	72
1996	Top	47.9	89
	Middle	32.9	80
	Bottom	20.0	74
1997	Top	55.2	88
	Middle	40.5	81
	Bottom	24.5	73
1998	Top	61.4	92
	Middle	43.5	83
	Bottom	21.6	68

* prorated to 162 games

Source: "The Rich"

One good sign is that it is not just about the money. Spending a lot on your team does not guarantee you success. John Moores, San Diego Padres owner, said, "Put it this way. Spending a lot doesn't mean that you're going to win. But not spending a lot means you aren't going to win." Consider the following statistics:

- In the 1990s, the Los Angeles Dodgers have won 720 games, while the cash-strapped Montreal Expos have won 708 games.

- The Baltimore Orioles had the highest payroll in 1998, but finished with a sub-.500 record.
- The Dodgers increased their payroll from $48.5 million to $60.7 million last year, but won five fewer games.
- In the 1990s, the Montreal Expos are 12th in winning percentage and only 28th in payroll. On the other hand, the New York Mets are 11th in payroll and 21st in wins, while the Anaheim Angels are 12th in payroll and 22nd in wins.

Spending does not guarantee winning, but there is an increased relationship. Consider Table 1.4 which ranks each team in terms of winning percentage, payroll, attendance, city size, operating income, and total revenue for the 1990s. Of the top 10 teams with the best winning percentages, eight of them are in the top 10 in payroll. To spend a lot, the team needs to be bringing in a lot of revenue. In terms of total revenue, seven of the ten best winning percentages are also top 10 in total revenue. These relationships are not as strong for the middle 10 and bottom 10 in winning percentages and their respective payrolls or total revenues. This indicates that you can win and compete without spending a ton or having a lot of resources at your disposal, but to be among the game's elite, you need to have those resources.

This obvious link between those with the resources to spend on players and their higher winning percentages is causing some strife in baseball. Commissioner Bud Selig said, "You can see the disparity growing, both in terms of gross revenue and payroll. That's obvious. Clearly, disparity is the No. 1 problem we have. It's only getting worse. It's a problem that has to be addressed." This disparity will be discussed at greater lengths later. However, a quick look at payrolls within divisions provides a perfect

example of what Selig is talking about. In the American League Central this year, the Cleveland Indians payroll is $50 million more than the Minnesota Twins. The same is true in the American League West where the Texas Rangers are outspending the Oakland A's by $50 million. In the American League East and National League East, it is even worse. The Yankees are outspending the Tampa Bay Devil Rays by $62 million in the American League, and the Mets and Braves are outspending the Florida Marlins by $60 million. Selig continues his analysis of the situation by saying, "It's not just the spending. You wouldn't have disparity if everyone were spending. The concern is that some are spending while some cannot. This has to be addressed" ("The Rich").

TABLE 1.4

Team	Winning Percentage	Payroll	Attendance	City	Operating Income	Total Revenue
Braves	.591	2	4	12	18	10
Yankees	.541	1	11	1	1	1
White Sox	.533	10	16	3	14	7
Indians	.523	16	9	16	10	11
Dodgers	.517	5	3	2	7	4
Red Sox	.517	3	8	7	5	3
Orioles	.515	4	2	4	2	2
Blue Jays	.515	6	1	10	11	5
Astros	.514	19	22	11	13	16
Reds	.512	9	12	24	28	21
Rangers	.511	8	7	9	6	9
Expos	.509	28	28	15	12	27
Giants	.505	7	19	5	20	14
Pirates	.500	26	24	21	21	25
Mariners	.493	15	13	14	22	18
Athletics	.493	18	18	5	19	13
Cardinals	.491	14	6	20	9	12
Padres	.490	22	20	19	16	23
Rockies	.484	24	5	22	3	19
Cubs	.483	13	10	3	8	8
Mets	.482	11	17	1	4	6
Brewers	.480	23	25	26	26	26
Angels	.480	12	14	2	23	17
Royals	.476	17	21	25	27	20
Twins	.471	25	23	17	25	24
Phillies	.470	20	15	6	17	15
Tigers	.454	21	26	8	24	22
Marlins	.450	27	27	13	15	28

Source: "The Truth"

Knowing that they cannot compete, these teams that are lacking the resources to spend like the big teams have started trimming their already tiny payrolls. The thinking is "Why should I spend $30 million and finish fourth when I can spend $15 million and get the same result?" Therefore, they are unable and/or choose to not keep their best players. This creates a vicious circle. The team cannot afford to keep its best players. Then due to the escalating bonuses awarded in the draft, it is priced out of the market for the best young talent to replace the stars it lost. This leads to a drastic drop-off in attendance, which in turn reduces revenues, which makes it an even less attractive commodity for radio and television, which reduces visibility, which . . . In the end, the team is left with fewer revenues than it originally started with, which were already not enough to field a competitive team. To help solve their problems, many of the struggling small market teams are trying to gain financing for new parks. These would serve as economic life rafts for their sinking franchises, but they are facing various obstacles preventing them from completing a deal ("The Rich").

John Hart, Cleveland Indians general manager, described the situation perfectly when he said, "You're always going to have teams with deeper pockets. This is America and this is capitalism. But at some point, baseball is going to have to determine what some teams can do and other teams, new ballpark or not, can't." This quote admits baseball needs to do something about this problem of the increasing impact spending is having on competitive balance. The game is in grave danger when baseball can no longer sell the possibility of contention in nearly half of its markets ("The Rich"). Since you almost have to be in the top half in payroll to finish above .500, baseball's current situation would lead some to see it as being in grave danger.

Team Finances

The general consensus appears to be that baseball has too many teams who cannot compete on the field because they cannot compete financially. This is nothing new for baseball. Ever since free agency in 1976, people have been predicting the hopelessness of certain franchises. Four of the most recent examples happen to have had some of the most success the last couple years.

- The Cleveland Indians acquired the label as the worst franchise in baseball during the late 1980s. However, the team's performance in the 1990s has helped increase its estimated value from $77 million (the second lowest in baseball) to $322 million (among baseball's top five valued franchises).
- The Seattle Mariners had never finished a season with a winning percentage above .500. However, in the past three years, they have won two division titles and drew three million fans in 1997.
- The San Diego Padres implemented the cost-cutting procedures discussed earlier by purging payroll in 1993. However, they rebuilt their team and had very successful seasons in 1996 and 1998 when they reached the World Series.
- After losing 97 games in 1991, the Houston Astros have put together six straight winning seasons. That streak has been matched only by the Braves and Yankees ("Success").

Further, owners have always complained about their financial situation. It seems most teams are losing too much money or not making enough money to compete with the big boys. However, nobody really knows if the owners are telling the absolute truth since

only two teams have agreed to open their books to the public ("The Truth"). Selig claims only 10 teams turned a profit in 1998, yet five of the seven teams with the lowest payrolls did ("Success"). Does that mean that only five of the huge revenue-generating teams made money?

Controversial claims about profits have been the norm in baseball for years. Major League Baseball claimed a loss every year from 1975 through 1985 and then a profit every year until the strike. The strike then led to huge losses for the industry. However, other sources claim smaller losses or even profits in some of those years. Economist Roger Noll looked at baseball's books in 1985. Although he would not specifically state the true financial situation of baseball, he did acknowledge that he found enough hidden revenue and accounting techniques to turn the claimed $50 million loss for 1984 to a $9 million profit (Grabiner).

So what are the problems in determining the truth in profits for baseball? Three main problems arise when analyzing these figures.

1. The use of related-party transactions in accounting. These transactions are between two entities that provide money to the same people. For example, an owner who owned the ballpark that the team played in could include the finances of the ballpark in the team's finances.
2. The use of different accounting practices in team finances. For example, half of the purchase price of a franchise is attributed to player contracts, which are considered the purchase of short-term assets so they may be depreciated. The true asset purchased is the right to acquire future players. Plus, a paper loss is useful for tax benefits.

3. Part of the profits comes from appreciation of the franchise value. For example, George W. Bush was a principal investor in the Texas Rangers in 1989 by contributing $606,302. When the team was sold in 1998, he received $14.9 million. Also, the Florida Marlins paid $95 million in expansion fees to enter Major League Baseball in 1994 and were sold for $150 million in 1998 ("Success").

Since profits are so hard to analyze, a different approach would be to look at the components of profits: revenues and costs. The three main sources of revenue for baseball teams are broadcasting, gate and stadium, and licensing. Broadcasting revenues come from both local and national sources. National broadcasting revenues are distributed equally among the teams, while the distribution of local broadcasting revenues is unequal and growing more so (Zimbalist 48). Local broadcasting revenues have been the focus of much debate lately as they continue to become more unequal. For example, in 1985, the difference between the highest and lowest local broadcasting revenues was $12.4 million. In 1990, that figure had grown to $52.6 million and is most definitely higher today (Zimbalist 48). The difference in national and local sources of revenue and trends associated with the two will be discussed more later.

The second source of revenue, gate and stadium, is sometimes divided into two sections to better analyze it. Gate revenue refers to revenue obtained primarily through tickets, while stadium revenue includes parking, concessions, luxury boxes, and stadium advertising. The share of ticket sales in total revenue has been falling, but gate revenue has grown in absolute terms due to rising attendance, increased ticket prices, and new income from luxury boxes. For example, in 1950, 76% of total revenues came from

ticket sales and 14% came from concessions, stadium clubs, advertising, and parking. In 1975, those figures were 61.5% and 12.8% respectively, and 40.6% and 13% in 1988 (Zimbalist 51).

Attendance has grown steadily. This is evident in Table 1.5. The only period where there was negative growth was during the strike. However, attendance has returned to pre-strike totals, partly due to the addition of two more teams. As mentioned previously, ticket prices have also increased, but not in real dollars. There have been minor fluctuations throughout history, but they have remained essentially constant over time (Grabiner). There exists a common misconception that outrageous ticket prices are attributable to the increasing salaries. In fact, ticket prices are set at a point to maximize revenue. The additional cost of having another fan attend a game is almost nothing, so teams focus on the revenue generated. Therefore, ticket prices are not affected by differing costs such as increasing salaries or a lower television contract. A change in demand will impact ticket prices, however. For example, a new stadium or the signing of some free agents may dictate a greater demand to see the team play (Grabiner).

Stadium, or venue, revenue has been the subject of much more attention in the 1990s. As mentioned earlier, many teams have or are attempting to finance new state-of-the-art, baseball-only parks. These new parks generate new interest and often come equipped with numerous, expensive luxury boxes to generate even more revenue. This source of income is important because it generates tremendous amounts of revenue, but is not shared at all as part of baseball revenue sharing plan. Gate revenue, on the other hand, is shared partially (Zimbalist 57).

TABLE 1.5

Attendance
(millions)

Year	Total Attendance	Attendance per Club
1950	17.5	1.09
1960	19.9	1.24
1970	28.8	1.20
1978	40.6	1.56
1984	44.7	1.70
1990	54.8	2.11
1991	56.8	2.18
1992	55.9	2.15
1993	70.3	2.51
1994	50.0	1.79
1995	50.3	1.80
1996	60.1	2.15
1997	63.0	2.25
1998	70.6	2.35

Source: "Success"

The final source of revenue, licensing, is a relatively newer source for baseball when compared to the other professional sports. Baseball has actually followed the lead of the NFL and NBA in their licensing practices. Major League Baseball Properties, Inc. was created in 1987 as the official trademark, licensing, publishing, and marketing arm of baseball teams. It is also in charge of protecting the trademarks of these teams. The royalties received on the sale of goods with these logos are then divided evenly among all the teams. Each team received about $2.7 million in 1990 and $3.7 million in 1991 (Zimbalist 57). However, that figure has since dropped to about $1.7 million last year (www.mariners.org).

So what is the revenue situation like in baseball today? As you can see in Table 1.6, average team revenues continue to grow. Since 1990, average team revenues have grown at an average of 8.8% per year. This includes the strike, which drastically lowered revenues for two years before they returned to pre-strike levels. More importantly,

however, is looking at the distribution of average team revenues since the common perception is that teams are unable to compete due to financial reasons. Many factors impact the variation of team revenues, but two particular ones account for 75% of the variation. These factors include:

1. Each one million in population is worth $2.9 million in revenues.
2. Each one point increase in winning percentage from the year before adds about $29,000 in revenues (Scully 119).

TABLE 1.6

Growth of Average Team Revenues
(millions)

Year	Revenue
1970	$ 5.7
1977	9.0
1983	20.1
1990	52.1
1991	57.9
1992	60.9
1993	63.4
1994	40.4
1995	50.4
1996	66.0
1997	79.1
1998	88.8

Source: Zimbalist 58 and www.baseball1.com

The data seems to indicate that the variation in average team total revenues is widening. This data is presented in Table 1.7. As you can see, the maximum/minimum value and coefficient of variation have developed a generally increasing trend. This indicates a widening gap between those who have the resources and those who do not. Most of this increase can be attributed to the increased growth of local revenues. Up through 1992, local revenues grew considerably more unequal, but there was an equalizing trend in overall revenues among teams because national sources of revenue

were growing more rapidly and obviously shared equally among the teams (Zimbalist 98). This is evident in the table as both the maximum/minimum value and coefficient of variation decreased through 1992, representing less variation. However, there has been a reversal in that trend. An increased growth rate of local revenues coupled with similar national revenues divided among more teams has lead to increased variation in team revenues (Zimbalist 101).

TABLE 1.7

Distribution of Team Total Revenues
(millions)

Year	Mean	Standard Deviation	Minimum	Maximum	Maximum/ Minimum	Coefficient of Variation
1929	.758	.369	.358	1.669	4.664	.4864
1939	.761	.361	.249	1.355	5.436	.4737
1950	2.002	.821	.737	4.212	5.716	.4100
1980	12.795	5.119	5.517	26.241	4.787	.4000
1986	28.701	9.320	NA	NA	3.161	.3247
1990	51.715	15.837	34.000	98.000	2.882	.3062
1991	57.850	16.733	38.800	91.100	2.348	.2892
1992	60.900	17.134	39.900	94.600	2.371	.2813
1993	63.400	16.438	43.000	107.600	2.502	.2593
1994	40.400	11.807	25.000	71.500	2.860	.2923
1995	50.400	16.971	24.900	93.900	3.711	.3367
1996	66.000	23.751	39.900	133.300	3.341	.3599
1997	79.140	29.286	43.600	144.700	3.318	.3701
1998	88.777	33.540	46.500	175.500	3.774	.3778

Source: Zimbalist 98 and www.baseball1.com

Where revenue is greatly affected by current club quality, cost, the other aspect of profits, is more associated with ex ante or planned quality than ex post or realized quality. In terms of cost, teams commit money prior to the season based on expected quality. Therefore, the current quality of the team and current total cost may not be closely related (Scully 125). In fact, numerous studies have been conducted to show that there is very minimal relation between costs, primarily salaries, and winning. However, if the team

spends wisely, then those costs can translate into wins. There are five basic direct cost categories. They include:

1. Team costs (75-80% of total costs)
2. Game
3. Player development and training
4. Sales and promotion
5. General and administrative (Scully 123).

Using some of the same analysis that was used for revenues, an analysis of costs can be attained. Table 1.8 shows the growth of average team total costs. Since 1990, the average team total cost grew 11.5% per year. Considering the growth rate for revenues was 8.8%, this is not encouraging.

TABLE 1.8

Growth of Average Team Total Costs
(millions)

Year	Total Costs
1970	$ 7.0
1977	10.3
1983	22.6
1990	45.2
1991	53.0
1992	57.6
1993	57.3
1994	44.9
1995	48.3
1996	58.7
1997	76.6
1998	86.9

Source: Zimbalist 60 and www.baseball1.com

Even more importantly than total team costs are average team payrolls since they constitute a vast majority of a team's costs. Plus, salaries are generally perceived to be growing much faster than revenues. Table 1.9 shows the growth of average team

payrolls. Obviously the strike-shortened seasons of 1994 and 1995 experienced a drop-off in salaries, but so did 1998, which is very abnormal since the definite trend is upwards. Since 1990, the growth rate for average team payrolls per year is about 17%. This is about double the average growth rate per year for revenues and may be cause for alarm if the trend continues.

TABLE 1.9

Growth of Average Team Payrolls
(millions)

Year	Payroll
1980	$ 3.6
1986	10.4
1990	17.4
1991	26.2
1992	35.2
1993	35.8
1994	25.6
1995	31.2
1996	35.4
1997	45.2
1998	41.1

Source: Zimbalist 99 and www.baseball1.com

The players' argument would be that salaries have had to increase at a faster rate in order to reach the point where salaries made up an acceptable percentage of revenues. The players have fought hard so that they were earning X% of revenues in salaries. Table 1.10 shows the percentage share of revenues that payrolls constitute. Ignoring the strike years, this share has increased steadily until it leveled off around 57% in 1992, 1993, and 1997.

Like revenues, the important aspect of this payroll analysis is determining the variation of average team payrolls. Basically, this analysis indicates the difference between the big spenders and those who do not have the money to spend. Table 1.11 shows the distribution of team payrolls. Unlike revenues, no definite trends can be

identified in the maximum/minimum value and coefficient of variation. Both are obviously higher in the 1990s than in previous decades as evident by the higher variation values, but a significant trend has not developed for the 1990s. It is interesting to note the extreme values for 1998. Both the maximum/minimum and coefficient of variation are higher than any other year in the table by far. The early reports on 1999 salaries indicate that these values will not be near as high as 1998, but similar to other 1990s figures.

TABLE 1.10

Salary Share in Team Revenues
(%)

Year	Salary Share
1974	17.6
1978	25.1
1982	41.1
1986	40.0
1990	33.5
1991	45.3
1992	57.8
1993	56.5
1994	63.4
1995	61.9
1996	53.6
1997	57.2
1998	46.3

Source: Zimbalist 87 and www.baseball1.com

Combining the findings from the revenue and payroll analysis, a general conclusion can be drawn that the variation in revenues and spending definitely seem greater in the 1990s and appears to be increasing. This translates into a greater gap between the "haves" and the "have nots." So how big is this gap? Table 1.12 provides an interesting look at that gap. It shows the largest team payroll, smallest team revenues, and the ratio of these two figures for each year. That ratio is much higher today than it was in 1990 or 1980. Ignoring the strike years, it appears that it may have reached a

plateau since the last three years have had ratios within .05 of each other. However, that means that the largest payroll in baseball is more than one and one-half times greater than the team with the smallest revenues. That is cause for concern.

TABLE 1.11

Distribution of Team Payrolls
(millions)

Year	Mean	Standard Deviation	Minimum	Maximum	Maximum/ Minimum	Coefficient of Variation
1929*	5.884	1.358	3.511	9.144	2.604	.2308
1939*	5.708	1.548	3.606	9.037	2.505	.2712
1950*	10.814	2.766	5.853	16.290	2.783	.2558
1980*	3.569	1.230	1.375	6.073	4.416	.3446
1986*	10.379	3.051	4.696	16.441	3.500	.2910
1990	17.420	4.000	12.600	23.600	1.873	.2296
1991	26.190	7.045	12.100	39.200	3.240	.2690
1992	35.200	11.162	10.100	59.300	5.871	.3171
1993	35.800	11.987	12.200	56.200	4.607	.3348
1994	25.600	6.826	11.100	37.100	3.342	.2666
1995	31.200	9.281	12.100	50.500	4.174	.2975
1996	35.400	12.525	17.500	63.000	3.600	.3538
1997	45.240	13.548	17.300	69.700	4.029	.2995
1998	41.080	17.514	8.318	71.861	8.639	.4263

* team average salary multiplied by 25 (roster limit)

Source: Zimbalist 99 and www.baseball1.com

TABLE 1.12

Big Market vs. Small Market
A comparison of the largest annual payrolls and the smallest annual revenues
(millions)

Year	Largest Payroll	Smallest Revenues	Largest Payroll/ Smallest Revenues
1980	$ 6.1	$ 5.5	1.11
1990	23.6	34.0	.69
1991	39.2	38.8	1.01
1992	59.3	39.9	1.49
1993	56.2	43.0	1.31
1994	37.1	25.0	1.48
1995	50.5	24.9	2.03
1996	63.0	39.9	1.58
1997	69.7	43.6	1.60
1998	71.9	46.5	1.55

Source: Zimbalist 99 and www.baseball1.com

Salaries

This discussion of payrolls provides the background for the other much-discussed aspect of baseball – salaries. As long as people are being paid millions of dollars to play a game, people are going to question the amount ballplayers are being paid. Before any judgements can be made though, the salary system of baseball must be analyzed. Table 1.13 shows the average and median salary for selected years from the birth of free agency in 1976 to last year. There is an obvious upward trend for the average salary with smaller percentage increases the last couple of years. However, the median salary has obviously increased, but the trend is not a smooth upward direction. The most obvious observation may be the drastic difference between the average and median salary. This is indicative of a system of many lower paid ballplayers and a few much higher paid players increasing the average salary.

TABLE 1.13

Average Salary

Year	Average	Median
1976	$ 52,300	NA
1980	146,500	NA
1984	325,900	$229,750
1988	430,688	235,000
1990	589,483	350,000
1991	845,383	412,000
1992	1,012,424	392,500
1993	1,062,780	371,500
1994	1,154,486	450,000
1995	1,094,440	275,000
1996	1,101,455	300,000
1997	1,314,420	400,000
1998	1,378,506	428,500

Source: www.usatoday.com

Why do baseball players make so much money? Baseball players possess a rare talent, and the supply of talented ballplayers is very limited. Whenever there is a great demand for scarce talent, the system bids up the price (Scully 151). This situation is

similar to entertainers who demand even higher salaries (Scully 152). It is interesting to note that athletes receive much more public criticism for making $5 million a year to play a sport, when entertainers can demand $20 million for a single movie.

Some specific factors are crucial to the determination of player salaries. These include the overall quality of player performance, weight or fraction of the player's contribution to team performance, experience of the player, and popularity or recognizability of the player to fans (Scully 156). A different approach to determination of player salaries is the marginal revenue approach. The value of a player to his team is his marginal revenue. Studies covering this topic typically look at marginal revenue product (MRP), which is determined by finding the impact team batting or pitching have on winning percentage and then the impact of winning percentage on revenue. From 1984 to 1989, an extra win was worth $400,000. Projecting this to revenues in 1994, a win would be worth $1 million (Grabiner). Therefore, a player who contributed five more wins to his team would be worth $5 million.

However, studies have shown that there appears to be a stronger relationship between salaries and service time than salaries and MRP. Every additional year of service increased salary by $78,700 (Zimbalist 93). This is evident in Table 1.14, which shows the average salary for a player with X years of service in 1990. The data shows a definite upward trend with a few exceptions. The automatic rise in salaries over time is not just a seniority effect since a player's performance also increases over his career up to a point (Scully 157). However, the earnings growth with seniority has been shown to be largely independent of productivity (Blass 268).

TABLE 1.14

Mean Salary and Years of Service, 1990

Years of Service	Number of Players	Mean Salary
0	172	$ 108,396
1	90	154,728
2	68	262,810
3	67	593,038
4	66	760,201
5	55	1,018,120
6	43	1,047,719
7	47	956,515
8	29	1,191,424
9	20	1,280,542
10	15	1,229,979
11	14	920,940
12	18	1,320,307
13	7	1,273,150
14	4	1,068,764
15+	20	1,398,812

Source: Zimbalist 83

There also appears to be a stronger relationship between salary in a given year and performance in the previous year rather than the current year. This is evidence of the uncertainty of salary determination and the variability of player performance from year to year (Zimbalist 93). Frankly, this makes perfect sense since a player is usually paid based on the previous year's performance. Past performance is then projected into future performance and a salary is based on that information.

Another interesting facet of salary determination is the debate of exploitation. Exploitation refers to the underpayment of some players. This analysis usually involves comparing salaries to players' MRPs. The general trend is that players with less than two years experience are drastically underpaid, those with two to five years experience are somewhat underpaid, and those with six or more years of experience are overpaid (Zimbalist 92). However, more recent research indicates that the underpayment of younger players, which was commonly attributed to exploitation, may be explained by

the surplus necessary to recoup the team's investment in the player during his minor league training (Krautmann 93). The other question associated with this information is why a player would be played above his MRP or in other words, why a veteran tends to be overpaid. This question involves the following possible reasons:

- Misguage of player's worth by management
- Value to the team is greater than his actual physical product, or by signing a player it ensures another team cannot get him
- Seek team stability so sign him to a long-term deal
- Team is not actually maximizing profits
- Player's worth goes beyond what he contributes on the field (Zimbalist 94).

This concept of signing players to long-term deals has also caused considerable debate in baseball. Teams continue to try to lock-up young players for many years to prevent having to pay more money down the road and to ensure team stability. Some people argue that long-term deals cause players to develop a sense of complacency and lack of desire since they have guaranteed income for future years. Others argue that players are motivated by winning and that the money situation does not play a role. However, there has been some concrete evidence supporting the former argument. Consider the following statistics:

104 (Unnamed) Hitters

Year before signing a multiyear contract: 133 games; 13 homers; 63 RBI; .280 avg.

Year after signing multiyear contract: 124 games; 11 homers; 56 RBI; .273 avg.

Second year after signing: 117 games; 12 homers; 54 RBI; .267 avg.

Third year after signing: 118 games; 10 homers; 53 RBI; .263 avg.

57 (Unnamed) Pitchers (Starters and Relievers)

Year prior to signing multiyear contract: 39 games; won 12; lost 9; 3.33 ERA

Third year after signing multiyear contract: 35 games; won 9; lost 8; 3.91 ERA ("Balls" 232)

This data definitely supports the notion that long-term deals cause players to produce at a lower level and less often due to injuries. This may suggest that long-term deals are bad for the game and may need to be analyzed.

Chapter II

TOPICS TO BE ADDRESSED

The 1990s can be labeled as the most competitive decade in the history of baseball. However, an increasing number of teams enter the season with almost no chance to compete for a title. Much of this disparity can be attributed to the growing disparity in the finances of the "haves" and "have nots." Therefore, baseball needs to make some changes to make the playing field more even as it heads towards its next collective bargaining agreement. These changes can be focused primarily on the topics discussed earlier, mainly revenues and costs.

To create a leveler playing field by limiting the variation in team finances, there are two options:

1. Establish some cost containment mechanisms to limit spending, primarily on salaries.
2. Develop some method to provide more revenues for the teams lacking the resources to compete in today's game.

The first option results in less money being invested in the game as the teams that have the resources would simply save the money they would have spent on salaries and keep it as profit. Personally, I would rather see that money staying in the game making it an overall better product. I would much rather see 30 higher quality teams all competing for a title than 30 weakened teams competing for a title. However, some type of cost containment mechanisms need to be established since salaries continue to grow faster

than revenues. Therefore, combining the two options and applying them to the more controversial topics facing the game today including revenue sharing, payroll cap or tax, salaries, and the amateur draft may give baseball its best option.

Revenue Sharing

Following the lead of the NFL, baseball has addressed the increasing variation in team revenues by implementing a new revenue sharing program to share more revenues. Baseball used to only share national revenues, such as national broadcasting and licensing revenues, and a small percentage of gate revenue. However, the new plan developed during the strike called for the sharing of 22% of local revenues after deductions for certain expenses. This plan was to be phased in so that baseball would be sharing 60% of this level in 1997, 80% in 1998, 85% in 1999, and 100% after this year (Grabiner). Of course, the sharing of local revenues is in addition to the sharing of national revenues, which accounted for $16.5 million per team in 1998. These levels result in the sharing of roughly 18% of all revenues, compared to 54% for the NFL (Badenhausen). An additional aspect of the new revenue sharing plan is the luxury tax, which will be discussed in more detail later.

This agreement has provided some poorer teams with more resources to compete and theoretically may act as a cost containment mechanism. However, the current consensus is that it is not enough. In 1998, the top 13 revenue-generating teams contributed $100 million to the 15 teams with the lowest revenues. The Yankees were the biggest contributor by writing a check for $13 million. The Expos were the biggest benefactor as they received a check for $13 million. The Reds, Pirates, and A's all received $6 million (Badenhausen).

As for impacting salaries, revenue sharing should lower salaries since it takes money away from those teams that have the money to spend on players. However, if the teams benefiting from the agreement spend these new revenues, the effect should not be too great or even present. The effect on players would be similar to a payroll tax theoretically. The effect on the owners would be different from a payroll tax since they would pay a higher fixed sum with a tax on revenues than a tax on payrolls (Grabiner).

However, there are some obvious problems with the agreement that need to be addressed. The amount of revenue shared obviously has not been enough since the great variation in total team revenue and spending continues to increase. Many of the small market teams want to share more local revenues, especially local television money. For example, the New York Yankees generate more than $70 million a year from local television sources, while the Kansas City Royals bring in less than $5 million a year ("Looking"). Some teams, like the New York teams, Chicago teams, and Atlanta Braves have deals with superstations that generate tremendous amounts of revenue that is not shared. However, these requests have met great resistance from large market teams. Not only will these teams lose revenues by sharing more money, they fear these smaller teams will pocket the money resulting in huge profits. They will only listen to proposals detailing increased revenue sharing plans if there is a salary cap which will guarantee their own profits and force small market teams to spend the revenues they receive (Grabiner). Last year was a perfect example of what these teams fear. The main benefactors of the agreement, the Expos, Reds, and A's, each lowered their payrolls in 1998. Sure they were eliminated from the pennant races early, but they also made a profit. The Expos finished with an operating income around $5.6 million, the A's

finished with about $3.3 million, and the Reds also had a slight profit. Some of the main contributors, the Mets, Dodgers, and Red Sox, all lost more than $5 million mainly due to being big donors to the revenue sharing system (Badenhausen).

Payroll Cap or Tax

The two main cost containment mechanisms are a payroll cap and a payroll tax. A payroll cap is a predefined limit that teams must keep their payroll costs below. Most caps also include a floor, which is a minimum amount teams must spend on payroll. Both the NFL and NBA have salary caps. The owners in baseball have expressed their desire for a cap the last 15 years. They really pushed hard for one during negotiations during the strike, but the players are definitely opposed to any cap. Plus, salary caps present three major problems:

1. They limit what the superpowers can spend on players, but do nothing to increase the revenues for small market teams so that they can reach the floor. This problem calls for some sort of revenue sharing plan.
2. There are numerous ways to circumvent the cap, such as large signing bonuses. This is definitely a problem in the NFL where the same teams find new ways to get around the cap.
3. Perhaps most importantly, the players' union is very much opposed to the idea of a cap ("Looking").

Some small market teams have also suggested a cap on scouting and player development expenses (Grabiner). However, this idea presents a couple major problems. First, these departments for most teams are already thin. Scouts have too much area to cover as it is. Second, teams that want to focus spending on this area should not be

penalized since it is probably the most important part of building a successful team. Third, like the problems identified with the regular cap, teams will find ways to get around it (Quinn).

The second cost containment mechanism listed here is the luxury tax or payroll tax. This is a tax paid by any team that spends money on players above a predetermined figure. The revenue generated from the tax is then distributed to the teams with the lowest revenues. Theoretically, a luxury tax would create a new equilibrium where teams below the tax threshold would be able to sign more star players, and the taxed teams above the threshold would hire fewer stars. This would obviously improve the competitive balance between taxed and untaxed teams in favor of the untaxed teams (Gustafson 153). Since most of the higher revenue generating teams are the teams with the higher payrolls, this would also improve the competitive balance between the "haves" and "have nots."

How does this work? For a team above the threshold, a player's cost becomes his salary plus the tax to be paid. So if the tax was 10% and the team felt the player's value was $4 million, that team would probably only offer the player $3.6 million since it would have to pay $400,000 in taxes. For a team below the threshold, the player's cost is simply his salary so it could offer the player $4 million. If the player decided to sign where he would earn the most money, he would sign with the untaxed team.

How well the luxury tax would contain costs depends on the marginal tax rate. As far as how teams are affected, a very high tax rate would have the same effect as the cap because it would severely restrict spending. A lower tax rate would reduce salaries, but not prevent teams over the limit from competing. As for the impact on players'

salaries, the tax rate would correspond to the same amount in reduced salaries (Grabiner). For example, a 5% tax rate would result in a 5% depression in salaries as was shown earlier. On the other hand, a 75% tax rate would result in a 75% depression in salaries making it unlikely teams could go over the threshold.

Baseball is the only professional sport with a luxury tax. The current agreement calls for a tax through 1999 with no tax in 2000 and a union option for 2001. It also called for a marginal tax rate of 35% in 1997 and 1998, and 34% in 1999. The tax threshold was set at either a) $51 million in 1997, $55 million in 1998, and $58.9 million in 1999 or b) half way between the fifth and sixth highest payrolls, whichever was greater. Therefore, it would only apply to five teams at the most (Grabiner). When figuring the luxury tax, payrolls are for the 40-man rosters and include averages of multiyear contracts plus $5,737,269 to cover health and pension benefits; clubs medical costs; insurance; workman's compensation, payroll, unemployment, and Social Security taxes; spring training allowances; meal and tip money, All-Star game expenses; travel and moving expenses; postseason play; and college scholarships (www.usatoday.com). The money generated from the tax in 1999 is found in Table 2.1. However, the critics of the luxury tax are not sold on its merits. Larry Luccino, the San Diego Padres President, says, "It's nearly a joke."

TABLE 2.1

Team	**1999 Payroll**	**Tax**
Los Angeles	$97,046,647	$5,150,347
Yankees	94,392,399	4,247,903
Orioles	93,861,230	4,067,305
Braves	84,170,644	772,506
Mets	83,443,145	525,156

Source: www.usatoday.com

Salaries

Related to the containment of team payrolls is the containment of individual salaries. Salaries get much public criticism, but three major salary-related topics have received extensive criticism recently: contracts, salary arbitration, and free agency. The huge contracts of today, both in terms of length and amount, have resulted in some serious problems recently. First, the sheer amount of contracts today has given baseball a black eye. The big deals stars sign set the tone for the rest of the market and gain the most attention. Most fans do not gripe as much about the good player who signs for $5 million a year, but rather the star who signs for $12 million a year. As mentioned earlier, these deals also cause the average salary to vastly vary from the median salary. Second, the increasing length of these contracts presents trouble for management. Management has started a newer trend of signing players to longer-term deals to ensure team stability and give players even bigger deals. However, it locks teams into paying that player that much money regardless of the player's performance. This leads to the third problem of the contracts being guaranteed. Teams have to pay that player regardless of his performance unless the player can be traded. Numerous teams have been caught in a bind recently due to cheaper players outplaying veterans, who have failed to play up to the expectations of the contract. Management is partly to blame in this case since veteran players are often paid above their marginal revenue product, as was mentioned earlier. The only reasons that a club may terminate a contract are if the player:

1. Fails to demonstrate good citizenship and sportsmanship, keep himself in first class physical condition, or fails to obey the club's training rules.
2. Fails to exhibit sufficient skill.

3. Fails, refuses, or neglects to render other services stipulated in the contract (Scully 23).

Another controversial topic associated with salaries is salary arbitration. Both the owners and players have agreed to get rid of salary arbitration if an alternate plan could be developed. However, the two sides cannot agree on anything since the owners want to keep younger players under contract longer before they can test free agency, and the players want access to free agency sooner in a player's career.

Salary arbitration actually acts as a middle point between these two positions. It still gives the team exclusive rights to that player, but the player does not have to accept whatever the team offers. Salary arbitration is available to the top 17% of third year players and all players with at least three years of service. If a team and player are unable to come to terms, the team can offer the player salary arbitration or release him. If he is released, he becomes a free agent and his old team is unable to negotiate with him until May 1. A player cannot force the team to offer arbitration, but if the team offers it and he accepts, both sides submit their proposed salaries to an arbitrator. The arbitrator must then select one side's offer, which is why it is called final-offer arbitration. This discourages both sides from submitting unreasonable demands. The deal then is for one year with no incentive clauses (Grabiner).

Its main purpose is not to determine salaries, but to give incentive for players and clubs to negotiate (Marburger 74). However, should they be unable to settle on a contract, the arbitrator must decide. Team finances and the luxury tax cannot be considered when making a decision. Also, the decision usually is based on the salaries of comparable players (Grabiner). The arbitrator tries to replicate the salary determination

in the free agent market, but also incorporates an experience factor (Marburger 76). This means that the arbitrator tries to guess the value the player would have as a free agent, but still considers that the player has significantly less experience.

The results of salary arbitration throughout history are shown in Table 2.2. Two interesting observations can be made from this data. First, the number of players who file for arbitration that actually experience arbitration have decreased to the 1990s level of around 15%. Most cases are never heard by an arbitrator. Second, the winning percentages for the two sides are both about 50%, with the owners winning slightly more often. This leads many people to believe that arbitrators simply flip a coin. This would make sense since the arbitrators are selected at random from a pool of arbitrators that may or may not have much knowledge of baseball. However, the evidence shows that they actually rely on the facts of the case (Burgess 109).

There are a number of theories on how arbitrators actually determine which offer to choose. Some people argue that arbitrators engage in offsetting behavior. They act as compromisers even though it is final-offer arbitration by attempting to even out the decisions. The greatest chance for this to happen is when the same player comes to arbitration against the same team in successive years. However, more factors may be at work here since players facing arbitration for a second time are more likely to significantly lower the relative spread between their offer and the team's offer (Frederick 47). Other people argue that arbitrators exhibit conservative behavior. In this case, they would be more likely to side with the team as the degree of divergence between the offers grows (Frederick 33). Finally, some people argue that arbitrators use another approach

called parity decisions where they look at the evidence, determine the market value, and select the offer closest to this value (Frederick 34).

TABLE 2.2

Year	Filing for Arbitration	Number in Arbitration Hearings (%)	Arbitration Awards to Players (%)	Arbitration Awards to Management (%)	Average Player/Management Offer Ratio
1974	54	29 (54%)	13	16	1.19
1975	38	14 (37%)	5	9	1.21
1978	16	9 (53%)	2	7	NA
1979	29	12 (41%)	8	4	1.49
1980	65	26 (40%)	15	11	1.44
1981	108	21 (19%)	11	10	1.49
1982	103	22 (21%)	8	14	1.53
1983	88	30 (34%)	13	17	1.46
1984	80	10 (12%)	4	6	1.51
1985	97	13 (13%)	6	7	1.43
1986	159	35 (22%)	15	20	1.45
1987	108	26 (24%)	10	16	1.28
1988	111	18 (16%)	7	11	1.27
1989	131	12 (9%)	7	5	1.34
1990	162	24 (15%)	14	10	1.48
1991	157	17 (11%)	6	11	1.51
1992	157	20 (13%)	9	11	1.61
1993	118	18 (15%)	6	12	1.65
1994	93	16 (17%)	6	10	1.48
1995	61	8 (13%)	2	6	1.59
1996	76	10 (13%)	7	3	1.51
Totals	2,011	390 (19%)	174 (45%)	216 (55%)	1.44

Source: "Swings" 42

The final topic associated with salaries that receives much criticism is free agency. This is actually related to the size of contracts since free agency is the main reason these contracts continue to grow. However, both sides appear relatively happy with the way free agency works. The conflict arises over at what point in a player's career it should be offered. Another related problem involves the final topic to be discussed, the amateur draft. Baseball has a method of compensation for teams who lose free agents to other teams. A draft pick is given to the team who loses the free agent by the team who signs him. What pick the team receives depends on a complicated formula that labels a free agent as a Type A, B, or C free agent. These picks, known as

"sandwich" picks are then chosen between the first and second rounds, thus devaluing later picks in the draft (Grabiner).

Amateur Draft

The amateur draft is the other aspect of baseball that needs some changes made to it to make the playing field more even. Currently, the draft provides a means of selecting players for team's organizations. The selection rights are in reverse order of finish from last season. Once a player is selected, he is placed on the registration list. The club that selects him has exclusive contract rights with that player. If the player is unable to sign in a specified amount of time, he becomes eligible for reentry into next year's draft (Scully 21). All players from all countries are not eligible for the draft. Most international players eventually sign as free agents. In addition, other eligibility guidelines include:

- High school athletes may sign once their high school eligibility ends.
- High school dropouts are eligible if out of school for more than one year.
- A player may not enter the draft during his college eligibility or as a freshman, unless he is 21 and between school years, between his junior and senior year, has completed his college eligibility, or flunked out or withdrew and has been out of school for more than 120 days (Scully 22).

The draft was originally designed to improve the competitive balance. Before the draft's inception, all amateurs were free agents so the teams with the most money could offer higher signing bonuses to acquire the best young talent. Therefore, the draft was established to cut down on outlandish signing bonuses by giving one team exclusive rights to that player (Quinn).

However, some recent developments have caused some problems with the draft. For example, the draft kept signing bonuses in check until the 1980s when the big guys started giving huge bonuses. This set the precedent for future drafts since a player wants at least as much money as the same pick last year received. The increased use of agents has helped cause this drastic increase in signing bonuses, but the owners themselves are the primary reason (Quinn). Teams are not allowed to trade picks either. With these huge signing bonuses, some teams are unable to select players for fear of an inability to sign them. Teams then pass over these players because they are unable to trade their pick. Also, since international talent is not included in the draft, dealing with these players is just like it used to be before there was a draft. These amateurs are free agents and go to the highest bidder. Thus, the market has priced out small market teams ("Looking"). Finally, the "sandwich" picks have devalued later round picks so that the first selection of each successive round is worth less than it used to be.

Chapter III

RECOMMENDATIONS

What can be done about these problems? The following suggestions attempt to address the problems mentioned here and improve the state of baseball.

Increased revenue sharing. The variation in team revenues is causing numerous teams to enter the season without any chance of winning a title. Some new sources of revenue need to be provided to those teams to give them the resources to compete. Obviously, the current system is not doing the job. I do not think revenues should be shared as much as they are in the NFL because the larger market franchises should still benefit from their location. Plus, John Hart, general manager of the Cleveland Indians, summarized the situation perfectly when he said, "You're always going to have teams with deeper pockets. This is America and this is capitalism. But at some point, baseball is going to have to determine what some teams can do and other teams, new ballparks or not, can't." So I propose the following revenue sharing program:

1. Share all national sources of revenue, primarily national broadcasting revenue and licensing. This amounted to roughly $16.5 million in 1998.
2. Share 30% of all remaining revenues, primarily local revenues.
3. Distribute these shared revenues (excluding the national revenues) based on the schedule presented in Table 3.1.
4. Distribute revenues from the luxury tax as outlined in the following section.

TABLE 3.1

Team Total Revenue Rank	Percentage
1	1.33
2	1.53
3	1.73
4	1.93
5	2.13
6	2.33
7	2.50
8	2.67
9	2.83
10	3.00
11	3.07
12	3.13
13	3.20
14	3.27
15	3.33
16	3.30
17	3.40
18	3.47
19	3.53
20	3.60
21	3.67
22	3.83
23	4.00
24	4.17
25	4.33
26	4.53
27	4.73
28	4.93
29	5.13
30	5.33

New luxury tax and payroll floor. The increased revenue sharing provides the lower revenue-generating teams with the needed funds to compete. However, a payroll floor needs to be established to ensure that these teams attempt to use that money to put a better team on the field. Also, a new luxury tax needs to be implemented to discourage teams from spending considerably over a certain level. Teams should not be capped at a certain limit because I believe that if teams want to spend more money on trying to put a better team on the field, they should not be totally limited. However, outlandish spending needs to be curbed. Therefore, my proposal for a new luxury tax is as follows:

1. Payroll determinations will be based on last year's team total revenues. The basis for the luxury tax and floor will be 55% of the median team revenue. The reason for using the median figure rather than the mean figure is to prevent the influence of extreme data. For example, the New York Yankees had revenues that were almost $25 million more than the next closest team in 1998. This inflates the average team revenue figure.
2. The payroll range (with the salary minimum or floor at one end and the luxury tax threshold at the other) will be 84% and 116% of the figure determined in step one.
3. Implement an increasing tax schedule. There will be a new tax level for every increase of 10% of the figure found in step one over the tax threshold. For example, if the tax threshold was $55 million and 55% of the median team revenue was $50 million, the various tax levels would be $50 - $55 million, $55 - $60 million, $60 - $65 million, etc. until the highest payroll lies in a tax level. All money above the tax threshold will be taxed by an appropriate tax rate. The first tax level will have a rate of 25%, with each successive level increasing by 5%. The reason for this is that I do not want to penalize teams just over the tax threshold too much. What I want to concentrate on are those teams that spend substantially over the threshold. The tax schedule is presented in Table 3.2.
4. Based on previous years' salaries, a majority of the teams fall in the third tax level, or at a tax rate of 35% which is the current tax rate. The differences are that more than five teams can be taxed (in fact, there is not limit to the number

of taxed teams) and that the tax rate increases as teams vary from the tax threshold.

TABLE 3.2

Percentage of Median Team Revenue	Tax Rate (%)
116 – 126	25
126 – 136	30
136 – 146	35
146 – 156	40
156 – 166	45
166 – 176	50
176 – 186	55
186 – 196	60

5. The money generated from the luxury tax would be distributed to the ten teams with the lowest total revenues after the revenue sharing outlined previously. This money would be distributed according to Table 3.3.

TABLE 3.3

Team Total Revenue Rank	Percentage of Tax Money
21	1
22	3.25
23	5.50
24	7.75
25	10
26	10
27	12.25
28	14.50
29	16.75
30	19

The question then becomes, "What kind of effect would this plan have on team finances?" Using these plans on 1998 would produce the following results:

1997 median total team revenue - $75.15 million

55% of $75.15 million - $41.3325 million

Payroll floor (84% of $41.3325) - $34.72 million

Tax threshold (116% of $41.3325) - $47.95 million

TABLE 3.4

Tax Schedule

Tax Level	Tax Rate (%)
$47.95 – 52.08	25
52.08 – 56.22	30
56.22 – 60.35	35
60.35 – 64.48	40
64.48 – 68.62	45
68.62 – 72.75	50

TABLE 3.5

Total Team Revenues (millions)

Team	1998 Revenues	Contribute to Sharing	Sharing Proceeds	Payroll Tax	Proceeds from Tax	Revenues after Sharing
Yankees	$175.5	$47.7	$8.7	$7.97		$128.5
Indians	149.7	40.0	10.0	4.06		115.6
Braves	142.7	37.9	11.3	5.50		110.6
Orioles	140.5	37.2	12.6	11.96		103.9
Rockies	124.6	32.4	13.9			106.0
D'backs	116.3	29.9	15.2			101.5
Rangers	108.1	27.5	16.3	5.03		91.9
Dodgers	107.9	27.4	17.4	5.94		91.9
Red Sox	106.9	27.1	18.4	4.04		94.2
Mets	99.7	25.0	19.5	3.75		90.6
Cardinals	97.8	24.4	20.0			93.4
Devil Rays	93.7	23.2	20.4			90.9
Cubs	93.1	23.0	20.8	.47		90.4
Angels	88.5	21.6	21.3	.11		88.1
Astros	82.5	19.8	21.7	.09		84.3
Mariners	81.3	19.4	21.7			83.6
Padres	78.9	18.7	22.1	1.53		80.8
White Sox	74.1	17.3	22.6			79.4
Blue Jays	73.4	17.1	23.0			79.3
Giants	73.3	17.0	23.4	.14		79.6
Marlins	69.5	15.9	23.9		$ .51	78.0
Phillies	66.0	14.9	24.9		1.64	77.7
A's	56.7	12.1	26.0		9.62	80.2
Brewers	55.5	11.7	27.1		8.47	79.4
Reds	54.4	11.4	28.2		6.20	77.4
Tigers	54.2	11.3	29.5		5.06	77.5
Royals	53.5	11.1	30.8		2.78	76.1
Pirates	51.7	10.6	32.1		3.92	77.1
Twins	46.8	9.1	33.4		7.34	78.4
Expos	46.5	9.0	34.7		5.06	77.3

Replace arbitration with first-refusal free agency. First refusal free agency is when players are allowed to seek offers from other teams, but the team that they are with has the right to first-refusal. This means that a player receives an offer from another team

and his team has the option to match that offer or refuse it. If the offer is matched, he stays with his team. If not, he signs with the other team for the terms of the offer.

The following concepts need to be considered when replacing salary arbitration with first-refusal free agency:

- Only about 15% of the cases filed ever reached arbitration so it served as a threat more than anything.
- Arbitrators tried to value the player as if he was a free agent so the salaries under restricted free agency should not increase too much.
- However, any time a freer market develops, players' salaries are going to increase some because there are multiple teams bidding for the players' services. This does not bother me because younger players are generally considered to be underpaid anyway. Plus, many of these players suffer through some extensive time in the minors. According to many people, unless you experience the minor leagues, you have no idea of the hardships these players experience. Restricted free agency would provide a fairer market system and possibly compensate these players for their struggles in the minors.
- The net effect on salaries would probably be negligible or even cause the average salary to decrease. A first-refusal system would definitely lower the salaries of free agents though. Figure A shows the effect adding a first-refusal system would have on free agent salaries as a whole. More players can become free agents so the supply increases from S_1 to S_2. The reason free agents earn such high salaries now is that they act like a monopoly. Each

player is the only player that can offer those specific skills. However, by increasing the number of players eligible to be free agents, there is a greater pool of players to select from to find the skills a team desires. Figure B shows the effect this type of system would have on normal free agents. The restricted free agents act like substitutes for the normal free agents. This decreases the demand for normal free agents from D_1 to D_2. Obviously the salaries of players in first-refusal free agency are going to demand higher salaries than if they were in salary arbitration, but how much depends on how well the arbitrators valued players according to a free market. Figure C shows the effect on salaries for these players. Now that these players are in the free agent market, there is a greater demand for them. This makes sense since the only demand for these players before was by their own team.

FIGURE A

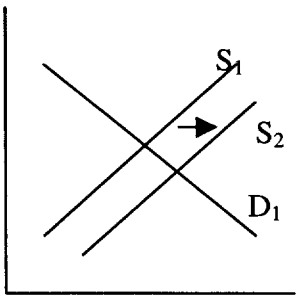


FIGURE B

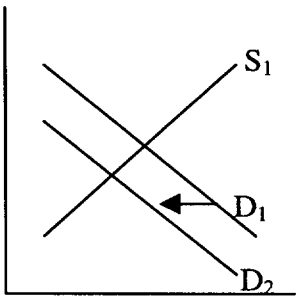
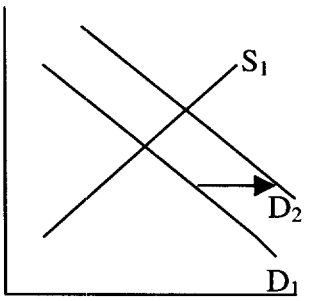


FIGURE C



- Thus, this system would increase the salaries of younger players and decrease the salaries of free agents. This would decrease the variation in salaries demanded by players and cause the mean and median salaries to become closer. It also would limit the extravagant contracts awarded to top-of-the-line free agents.

With these conclusions in mind, I have developed a proposal for a first-refusal free agency system. This plan is outlined as follows:

1. All players with service time between three and more years and less than six years are eligible. Basically, those players eligible for salary arbitration under the current system with the exception of the top 17% of third year players would be eligible for first-refusal free agency. Therefore, players would be bound to one team for the first three years of their careers; could participate in first-refusal free agency after their third, fourth, and fifth years; and participate in regular free agency after six years of service.
2. Players would have the month of November to obtain offers from other teams.
3. The player may only sign an offer sheet with one team during this period.
4. The player's current team then has 15 days to match the offer or refuse it. If the offer is matched, the player stays with that team for the terms listed in the offer. If refused, the player is free to sign with the team he signed the offer sheet with for the terms outlined in the offer.
5. All offers must be multiyear deals. That is, the offer must be for two years or more. This would provide a restriction on the number of players eligible for free agents to keep the number lower, provide some team stability, and limit player movement.
6. If a team matches the offer, the increased salary paid to the player will not count towards the team's payroll in terms of applying the luxury tax to it. The player's previous salary will be counted towards the payroll when determining

the luxury tax. This encourages teams to resign their young players and limits player movement.

Limits on contracts. As mentioned earlier, there are some aspects of contracts that need to be addressed to solve some problems. These problems include the length of the contract, sheer size of the contract, and the financial restrictions these deals put teams in when moving players. Therefore, I propose the following changes:

1. Establish a maximum single year salary. This does not have to be too restrictive; however, some type of cost containment mechanism needs to be implemented to guide top-line salaries. These salaries tend to set the pace for the rest of the market and receive the most negative publicity. By capping them, it keeps salaries in general in check, lowers the extremes that cause the variation in the mean and median salary, and curbs some of the negative publicity. I think a fair cap on the maximum salary a player can achieve in one year is 16% of the previous year's median total team revenue (without the revenue sharing of local sources; just the national sources). Applying this to last year's median team revenue of $81.9 million, the maximum one-year salary would be $13.1 million. This includes all performance bonuses also.
2. Establish a maximum contract length. In an attempt to offer free agents bigger deals and ensure team stability, teams have begun offering players longer deals. These cause many problems due to the invariability of player performance as the data presented earlier on long-term contracts showed. A maximum contract length is more of a safeguard for teams so that they do not become stuck with an underachieving player for many years. Players should

not have to worry about it if they simply perform. If they continue to perform, they will earn quality money when their contract expires. I would place a cap of three years for contracts with an option for a fourth year for the team. This prevents teams from having their hands tied with complex deals, ensures players will continue to be motivated to perform as high levels, and lowers the huge contract deals the public reads about in the papers.

3. Make the contracts not guaranteed any more. Too often a team is stuck with an underachieving player who is being outplayed by another player. Since teams are currently unable to release players without paying the player's maximum salary unless a team claims him off waivers, teams are stuck trying to trade big money, long-term deals. Currently, teams are not allowed to cut players for financial reasons. However, as was discussed earlier, teams can release players if they fail to exhibit sufficient skill. I would say that failing to produce up to the expectations of a $5 million contract would qualify here. Telling someone to take a pay cut or be released so that the team does not go over the tax threshold would qualify as a financial reason. I do not condone this. However, if a player is legitimately not performing up to certain standards, teams should have the opportunity to release him. I also do not think players should be cut without any compensation, but their entire contract is ridiculous. Perhaps a team would be responsible for paying the major league minimum to a player if it cuts him. This would not be too much of a financial burden on teams and provide players with some money.

4. Continue the minimum salary agreement from the current collective bargaining agreement. It calls for a minimum salary of $200,000 (Jennings 202) with a cost-of-living increase for 2001. Again, I have no problem paying younger players more money, and I think $200,000 with a cost-of-living increase every year is more than fair.

Draft changes. The current structure of the draft has caused many problems as mentioned earlier, mainly dealing with competitive balance. Not only has the current system priced some teams out of the market, it has also brought some negative publicity with the outrageous signing bonuses some amateurs are demanding. With that said, I think the draft needs the following changes implemented:

1. Make the draft international. All players in the world that are eligible for the draft and express a desire to be drafted, should have to register with Major League Baseball. Therefore, this would eliminate the foreign players who cannot currently be drafted from acting as free agents and demanding outrageous signing bonuses. Plus, it would give all teams, regardless of their financial situation from being able to draft the best talent in the world.
2. Eliminate the "sandwich" picks. These picks, given as compensation for the loss of free agents, devalue the picks later in the draft. The question then is whether teams should be compensated for losing free agents. If they are, I recommend that baseball use its current system of labeling players as Type A, B, or C free agents and then compensate teams with a first, second, or third round draft pick respectively. Personally, I do not think teams should be compensated for losing free agents. This encourages them to hold on to their

players. Plus, teams can simply do what the Baltimore Orioles did this year. They lost a number of free agents and were compensated accordingly, yet still signed a number of free agents.

3. Develop a signing bonus schedule for draft picks. This would keep signing bonuses in check and thus prevent the draft from pricing some teams out of the market. I have developed a schedule of signing bonuses for each round of the draft. Table 3.6 shows the signing bonuses for each round. The last column is the difference each pick or round would receive from the preveious pick or round. For the first five rounds, the difference applies to each successive pick. For rounds six through fifty, the difference applies to each successive round with all players in the round receiving the same bonus.

TABLE 3.6

Draft Round	Signing Bonus Range	Difference between Picks or rounds
1	$2,500,000 – 1,000,000	$50,000
2	992,500 – 775,000	7,500
3	767,500 – 550,000	7,500
4	542,500 – 325,000	7,500
5	317,500 – 100,000	7,500
6-10	98,000 – 80,000	2,000
11-20	78,000 – 60,000	2,000
21-30	58,000 – 40,000	2,000
31-40	38,000 – 20,000	2,000
41-50	18,000 – 0	2,000

4. Allow teams to trade draft picks. Coupled with the above signing bonus schedule, teams would know exactly how much a player is going to cost and could trade away picks if it knew it could not afford to sign that player. Also, this would allow teams to trade players away for picks to restock the minor league system or for other picks if there was a player in the draft that team wanted.

Chapter IV

CONCLUSION

So why should the owners and players make these concessions in the next collective bargaining agreement? The answer commonly given is for the good of the game. However, owners and players naturally want to hear how making these concessions will benefit them. This can be demonstrated through the use of a little game theory from economics.

Game theory refers to certain hypothetical situations where participants act out a game or situation. There are numerous types of games. The one that applies to this situation between both the owners themselves and between the owners and players is commonly referred to as the prisoner's dilemma. The situation goes along with it runs as follows. Two individuals, player 1 and player 2, are being held by the police in separate cells. The police know that the two committed a crime together, but lack sufficient evidence to convict them. So the police offer each of them separately the following deal: Each is asked to implicate his partner. If neither does so, then each gets no time in jail. If each implicates the other, then each goes to jail for a while. If one implicates the other but is not implicated, the first gets off (and gets a greater share of the loot), while the other goes to jail for a longer period of time. Both individuals rank the alternatives and determine the latter to be the best alternative, followed by the first, second, and third alternatives in that order.

We can let s1 and t1 to be the "do not implicate" alternatives and the s2 and t2 as the "implicate" alternatives. This provides us with the following picture:

		Player 2	
		t1	t2
Player 1	s1	5,5	-3,8
	s2	8,-3	0,0

Basically, the strategies s1 and t1 refer to cooperation (with each other and not the police), and strategies s2 and t2 refer to noncooperation.

Both players have the option to cooperate to a greater or to lesser extent. If one player unilaterally decreases the level of his cooperation, he benefits and his rival is made worse off. If both decrease their level of cooperation, they both are made worse off. Understanding how the players will play is simple because s2 strictly dominates s1 and t2 strictly dominates t1. Therefore, the participants will play s2-t2. Although this is the equilibrium for this game, it is a shame since the outcome is inefficient. This is because s1-t1 is a better outcome for both sides.

However, this inefficiency can be resolved by playing the game over and over. When this game is designed as a repeated game, it is known as the folk theorem. Experiments have been done testing this game. College students play the game many times with no fixed horizon in view. As long as they do not see a horizon looming, the subjects often cooperate and play s1-t1. The reason for this lack of short-run optimality is that in repeated play there is the long run to worry about as well. If one player tries sneaking in s2 to take advantage of the other player in the short run, the other will answer

with t2. The players will then realize there is less to gain by optimizing in the short run and chose to cooperate. It is important to note that this cooperation is not born out of fondness for the other player, but from the self-interested calculation of the benefits and losses that may accrue from polite behavior. Therefore, cooperation becomes an equilibrium outcome (Kreps 503-505).

How does this apply to the situation in baseball? First, I will apply folk theorem to the agreement among the owners to increase revenue sharing. Baseball is an interesting situation because conflicting entities make up the ownership of the sport. The league that governs the sport is composed of all the individual owners, who are in competition with each other. Therefore, the owners must be sold on the idea that cooperating with the competition is better for both sides in the long run. This is indeed an example of a repeated game because the teams compete every year.

To show that cooperation indeed leaves the sport better off, we can make the big revenue-generating teams player 1 and the smaller revenue-generating teams player 2. Cooperation would then be s1 and t1 where the big teams share their revenues with the smaller teams, and the smaller teams promise to use that money to put a better product on the field. This provides the best situation for both sides. If the big teams decide not to cooperate and maximize their own situation in the short run, the smaller teams will suffer and possibly not be able to compete. If these teams were eliminated from baseball due to this inability to compete, baseball would be worse off in the long run. If the smaller teams decide to pocket the money to benefit in the short run, the big teams will stop playing s1 and not share their revenues. This results in the smaller teams' inability to compete.

Plus, I would argue that in the long run, this cooperation would result in an improved situation for both sides. If these smaller teams use this money to put a better team on the field and are able to win, this success will result in increased revenues. Examples of this very situation were presented earlier in the paper, such as the Indians, Mariners, and Astros. All these teams put together successful seasons and generated more revenues. Where the average total team revenues increased 8.8% per year since 1990, the team revenues for the Indians, Mariners, and Astros increased 41.3%, 17.4%, and 13.3% per year respectively. These gains can be attributed to the improved performance on the field. With these increased revenues, these teams would be less dependent on shared revenues, which would put money back in the pockets of the big teams.

Folk theorem can also be applied to the collective bargaining agreement between the players and owners. In this game, the owners can be player 1 and the players player 2. Cooperation would result if the owners played s1 and the players t1. For the owners, cooperation would be granting the players some increased benefits, such as restricted free agency instead of arbitration and guaranteeing the players a certain percentage of revenues. The players would be cooperating by accepting some of the cost containment mechanisms, such as an increased luxury tax and limits on contracts. However, cooperation would be the best for both sides. If the owners decide to not grant the players anything and attempt to maximize their own profit in the short run, the players will surely strike resulting in a catastrophe that baseball might never be able to recover from. Should the players decide that there should be no cost containment mechanisms,

revenues would be unable to cover salaries and the owners would have to lock-out the players resulting in a similar situation to a strike.

The key is to find that happy medium where both sides can agree on some concessions. I have attempted to find that happy medium through my proposals for baseball's next collective bargaining agreement. Through my research of the current state of baseball, I was able to gain a better understanding of the situation and what was required to fix it. The picture does not look as gloom as some people are painting it, but if baseball does not make some changes, it may get to that point. More than anything, my number one request of baseball for the next collective bargaining agreement is that they not let the situation get to a boiling point. Remember: cooperation is the equilibrium.

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